



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

June 14, 2004

**MEMORANDUM**

**SUBJECT:** National Remedy Review Board Recommendations for the Koppers Newport Plant Superfund Site

**FROM:** Jo Ann Griffith, Chair  
National Remedy Review Board

A handwritten signature in black ink, appearing to read "Jo Ann Griffith", is written over the printed name and title.

**TO:** Abraham Ferdas, Director  
Hazardous Site Cleanup Division

**Purpose:**

The National Remedy Review Board (NRRB) has completed its review of the proposed cleanup action for the Koppers Newport Superfund Site in Newport, Delaware. This memorandum documents the NRRB's advisory recommendations.

**Context for NRRB Review:**

The Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions prior to their being issued for public comment. The Board reviews all proposed cleanup actions that exceed its cost-based review criteria.

The NRRB evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates

for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

Generally, the NRRB makes advisory recommendations to the appropriate regional decision maker. The Region will then include these recommendations in the administrative record for the site, typically before it issues the proposed cleanup plan for public comment. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may influence the final regional decision. The Board expects the regional decision maker to respond in writing to its recommendations within a reasonable period of time, noting in particular how the recommendations influenced the proposed cleanup decision, including any effect on the estimated cost of the action. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

### **Overview of the Proposed Action:**

The former Koppers Newport Plant Superfund site (Koppers) is comprised of approximately 300 acres and is located in the northern part of New Castle, Delaware. The site is the former location of a creosote wood treatment facility. The primary material used in the wood-treatment processes was a creosote/coal tar solution which was used to preserve railroad ties. Soils, sediments, and ground water are contaminated, with ecological risks being very significant. The Region is proposing to rechannelize Hershey Run, construct a subsurface barrier wall to contain non-aqueous phase liquid (NAPL), and consolidate all sediment and soil exceeding the cleanup criteria into a capped containment area within the footprint of the barrier wall.

### **NRRB Advisory Recommendations:**

The NRRB reviewed the information package describing this proposal and discussed related issues with Mr. Matthew Melon, Mr. Peter Ludzia, and Mr. Peter Schaul on May 12-13, 2004. Based on this review and discussion, the Board offers the following comments:

1. The Region's preferred alternative includes the excavation of creosote-related materials (i.e., contaminated soil, NAPL) to a depth of 25 to 30 feet in some areas. The Board questions the need for such deep excavations, given the expected future use of the land as a wetland, together with available data indicating that the NAPL is not a significant source of contamination to either the underlying groundwater or adjacent surface water. In response to questions at the meeting, the Region explained that excavation of the deeper materials, which apparently is supported by the Potentially Responsible Parties (PRP), will facilitate the creation of additional wetland areas to be used for wetland bank credits in the future. The Board is concerned that the package does not clearly justify that deeper excavations are necessary to achieve a protective remedy. Although the Region presumably would not object to the performance of this additional work by the PRPs,

based on the information presented in the package, the Board does not believe that it should be incorporated into the Region's preferred alternative. The preferred alternative should identify only those CERCLA remedial actions necessary for a protective remedy.

However, if the Region believes that excavation of the deeper materials is necessary to ensure a remedy which best meets the requirements of the National Contingency Plan (NCP), the Board recommends that the site decision documents contain sufficient information to support such an action.

2. The Board notes that the remedy preferred by the Region includes a component for passive NAPL recovery within the containment cells at an estimated cost of \$4.5M. However, it does not appear that the \$4.5M estimated cost for this remedy component includes potential operation and maintenance of the NAPL recovery and/or water treatment. The Board recommends that the decision documents specify these costs.
3. Information presented to the Board indicates the Region's preference for a passive NAPL recovery system is partially supported by the enhanced ability to manage ground water within the containment cells (e.g., alleviation of ground water mounding or build-up), in addition to meeting RAO's for containment of NAPL. The Board recommends that the Region develop a more comprehensive strategy for the containment cells, including evaluation of enhanced NAPL recovery methods and modeling of ground water inputs to the cell, in order to optimize containment effectiveness and management costs for NAPL and ground water.
4. Various soil and sediment volumes to be excavated as parts of the preferred alternative are presented in the package. Cost estimates are based on these volumes. The Board was not able to reconcile the various volume estimates and the related cost estimates. For example the PRPs' letter states that 112,000 cubic yards of soil would be excavated, while the package (page 27) says 180,000 cubic yards of soil would be excavated. Similarly, page 27 says 80,000 cubic yards of sediment would be removed (from Hershey Run?), while the volumes in Segments 6 to 10 of Hershey Run in Figure 5 total 116,000 cubic yards. The decision documents should present consistent volume estimates and their basis and should ensure that the estimated costs are based on the same volumes, or explain any differences.
5. The preferred alternative, Alternative 4, currently incorporates Monitored Natural Attenuation (MNA) of ground water contamination. The package and presentation to the Board indicated that the contamination is limited to a "halo-like" plume of dissolved contaminants. Furthermore, the package states that exposure to ground water is within or near the acceptable risk range. Based on this information, the Board believes that the ground water remedy is better characterized as source control with monitoring, rather than MNA.

6. The Board notes that the preferred remedy includes excavation of the channel in lower Hershey Run but does not include a cost for backfill of the existing channel. Destabilization of the existing channel could have an adverse impact on adjacent wetlands as well as upstream segments of Hershey Run. The Board believes that backfilling of Hershey Run may be necessary and therefore recommends that the proposed remedy include a provision for it and it be further evaluated during design. In addition, the Board recommends that the decision documents provide a more detailed comparison of the sediment excavation alternatives to in-situ capping and monitored natural recovery alternatives and better document the preference for removal.
7. The proposed cleanup goals for soil and sediment are 600 and 150 mg/kg total PAH, respectively. The different values suggest the possibility that post-remedy soils could recontaminate Hershey Run and wetland sediments. The Board recommends that the decision documents explain how the soil cleanup goal will adequately protect sediments and wetlands from recontamination.
8. This site has components of the remedial action (e.g., wetlands' reconstruction, relocated Hershey Run restoration, etc.) which may compliment future restoration of natural resources outside the CERCLA which may compliment natural resources' restoration program. The Board encourages the Region to continue collaboration with various parties (i.e., Trustees, State Agencies, USACE, and PRPs) to maximize the potential ecological value of the area and reduce remedial action costs to the maximum extent practical.
9. The Board recommends that the Region fully characterize the NAPL to be removed and treated off-site to determine the appropriate disposal options (e.g., waste streams containing pentachlorophenol may present other disposal issues).
10. In the package presented to the Board, zinc was identified as a non-site related contaminant. At the meeting, the Region informed the Board that the zinc is co-located with PAHs, therefore, it would be addressed by the proposed alternatives and that future recontamination (e.g., by the nearby Christina River) is not expected. The Region should clarify in the decision documents the basis for this conclusion.
11. The information presented to the Board regarding the Ecological Risk Assessment (ERA) was complex and at times confusing. The Board recommends that the decision documents include (1) a conceptual site model that adequately communicates the exposure pathways which exist at the site, (2) a condensed description of assessment endpoints and their relationships to site receptors and specific tests conducted, and (3) a description of any relevant new risk information which was obtained since the ERA was finalized.

12. The package presented to the Board did not contain information on surface water quality or surface water quality standards that may be ARARs at the site. The Region should ensure that the proposed remedy meets or waives any surface water quality ARARs and that these decisions are described in the decision documents.
13. Acute hazards to human health and ecological receptors from exposure to creosote are potentially present at this site, but such hazards may not be addressed in standard risk assessments. Such potential hazards should be discussed, at least qualitatively, in the decision documents.

The NRRB appreciates the Region's efforts in working together with the affected stakeholders at this site. We encourage you to include your draft response to these findings with the draft Proposed Plan when it comes into your OSRTI Regional Support Branch for review. The Regional Support Branch will work with both myself and your staff to resolve any remaining issues prior to your release of the Proposed Plan. Once your response is final and made part of the site's Administrative Record, then a copy of this letter and your response will be posted on the NRRB website. We will work with your regional NRRB representative on the timing of the release.

Thank you for your support and the support of your managers and staff in preparing for this review. Please call me at (703) 603-8774 should you have any questions.

cc: M. Cook (OSRTI)  
E. Southerland (OSRTI)  
OSRTI Branch Chief  
NRRB members